

Abstract:

The compressor of a transport refrigeration system is divided into two sections, with each section having a suction inlet. The refrigerant vapor from the evaporator is passed to one of the suction inlets, whereas the refrigerant vapor from a subcooler circuit is passed to the other suction inlet. A valve is operated to selectively insert or remove the subcooler as capacity requirements vary. In one embodiment, a six cylinder reciprocating compressor is used with five cylinders compressing within a first section, and a single cylinder compressing in the other section containing the subcooler circuit.